

REMARKS

The Office Action dated June 4, 2003, enumerates several objections directed to the specification claims. Each of these issues will be separately addressed in the same order as provided in the Office Action.

Oath/Declaration

The Office Action observed that David Triplett's name was misspelled on the Declaration. Furthermore, Mr. Triplett's middle initial "A" did not appear in the typed name of the Declaration. Also, Claude R. Ellis also did not have a middle initial in the Declaration. Accordingly, a new Declaration for these two inventors is provided. These are the same men who signed the original Declaration prior to filing the application and substantively nothing has changed as it relates to this application with the provision of this new Declaration.

Disclosure Objection

The Office Action observed that the claim to the benefit of the provisional application was not cross noted in the disclosure. The recommendation of the Examiner has been implemented through the enclosed amendment to provide this reference after the title on page 2 of the Disclosure.

Claim Informalities

Claims 1-15 and 23 were objected to because in claim 1, line 3, the term "continuous" was misspelled as "continuos." This misspelling has been corrected through the enclosed Amendment without altering the substantive scope of claim 1. Furthermore, in claim 23, line 1, the term "at" should have been inserted after the word

“is.” This correction has also been made as required by the Examiner. This second change also does not affect the substantive scope of claim 23.

Claim Interpretation

The Office Action also observes that the recitation of “for use with an extruder” designates a purpose which is not significant in terms of patentability of an apparatus claim. The Applicant understands this provision of the Patent Law and has amended claims 28 and 29 thus affecting all claims 28-36 by replacing the term “for use with” with -- in combination with -- .

Claim Rejections Under 35 U.S.C. § 112

Claims 20, 26, and 27 were rejected as being as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, claim 20 recites “The claim of claim”. The Applicant has implemented the Examiner’s recommendation by changing this phrase to -- The machine of claim -- in the enclosed amendment. Furthermore, claims 26 and 27 recite the “mold block assembly” but depend from a claim reciting “The machine”. Both of these claims have been amended to replace “mold block assembly” with -- machine --.

Claim Rejections Under 35 U.S.C. § 102

Claims 29, 32-34 and 36 are rejected as being anticipated by Van Wonderen et al., U.S. Patent No. 5,510,071. This device relies on reciprocal linear travel of two carriages which each separately support three pairs of mold block halves. The carriages respectively travel in reciprocal linear motion on spaced apart linear tracks. The carriages do not follow each other about a continuous loop or trackway. Accordingly as

affected by the enclosed Amendment claims 29, 32-34 and 36 are now not anticipated by Van Wonderen et al., U.S. Patent No. 5,510,071.

In reviewing the explanation the Office Action provided for the rejection, the Office Action stated: "A control actuator and piston cylinder assemblies 110, 112 define a coupling connected to the holders, wherein movement of a first holder relative to the carrier in a direction moves the second holder relative to the carrier, wherein movement of the first holder towards a center portion of the carrier moves the second holder toward the center of the carrier" citing Column 4, lines 23-43. This is not an accurate interpretation of the cited passage from the '071 Patent. Specifically, in referring to Figure 8 which is the only figure which shows the piston arrangement, the Column 4, lines 23-43 can best be understood with reference to that figure. Column 4, lines 23-43 are provided below for convenience.

Mold blocks 12,14 and 16 are sequentially opened as the plastic cools to a solid state by controlled actuation of the respective piston cylinder assemblies 110, 112 until all the molds of set 10 are fully opened, at which time lower motor 76 is reversed to reverse the rotation of ball nut drive 74 on fixed ball screw 72 to return carriage 64 to its start position as shown in Figure 5. The transverse piston cylinder assemblies 110,112 are then retracted to close the opposed segments of the mold blocks for resumption of travel to the right as viewed in the figures.

The upper set 20 of mold blocks 22,24 and 26 is likewise advanced to the right as viewed in the drawings to an extrusion die at the extrusion station 33 and the mold blocks are sequentially opened after advancing past the extrusion station, as depicted in Figure 6. when all of mold blocks 22,24 and 26 are opened in sequence, the set of 20 of opened mold blocks is returned to the start position by reversing motor 96 and the rotation of ball nut drive 94 on fixed ball screw 92. The actual timing and positions of opening and closing of mold blocks are generally represented by Figures 1-6.

In examining Figure 8, it is apparent that each of the mold halves are separately connected by separate pistons to the carriage independent of the opposing mold half. While it is true they are controlled by some kind of means, they are apparently independently controlled. It is only through the use of the Applicant's disclosure that one would be motivated to link the movement mechanically together.

Accordingly, even though Column 3, lines 52-55 states that: "Actuation on the mold block segments is not limited to use of hydraulic piston cylinder assemblies and other comparable actuating means such as rack and pinion drives, lead screws, chains and the like may be used.", there is no suggestion in this reference that the movement of one of the halves would be linked to move the other as is required in some of Applicant's claims.

Obviousness Rejections

Claims 1-11, 13-18, 25-37 were rejected as being obvious over Berns et al., U.S. Patent No. 5,494,430 in view of Van Wonderen et al., U.S. Patent No. 5,510,071. Berns et al. discloses a traditional corrugator which uses clam shell mold halves which are pivotally joined together at a base and carried by a carriage around a continuous loop. These mold halves are not linearly displaceable from one another. The Office Action correctly observes that Berns et al. fails to disclose the mold block assemblies as recited by claims 1-11, 13-18, 25-27 and 37.

The travel of the carriages is explicitly defined and even claimed in Van Wonderen et al. as being reciprocal linear travel. Claim 1 has been amended to address travel of the mold block assemblies as being restrained to travel in succession about a

continuous trackway. This cannot occur with the structure provided in the Van Wonderen et al. reference.

The mold block assemblies shown in the Van Wonderen et al. reference cannot travel in succession as the carriages would collide and probably result in the machine breaking itself. There are only two carriages in the Van Wonderen et al. reference and they must be oppositely mounted on spaced apart tracks so that when one set of mold halves is fully open, the other set of closed mold halves can pass therebetween.

Due to the linear reciprocal travel of the carriages in Van Wonderen et al. and the continuous loop path arrangement of Berns et al., there does not appear to be an obvious way to modify these references to incorporate a teaching of the other without relying completely on the Applicant's disclosure. Accordingly, the Applicant submits that a *prima facie* case of obviousness has not been met by the Office Action as there is no teaching of how these references could be combined, especially in light of the amendment to claim 1.

A teaching or suggestion to make a claimed combination as must be found in the prior art and not made from the Applicant's disclosure. In Re Vaeck, 947 F2d 488 20 USPQ 2d 1438 (Fed. Cir. 1991). As MPEP § 2143.01 states, that the "fact that the claimed inventions within the capabilities of one ordinarily skilled in the art is not sufficient by itself to establish *prima facie* obviousness." Applicant by no means admits that this invention was within the capability as one of ordinary skill in the art. Hundreds, and probably thousands of hours have gone into developing a working product. The references relied upon by the Office Action are not sufficient to establish a *prima facie* case of obviousness without some objective reason (apart from the Applicant's

disclosure) to combine a teaching of the references. See Ex parte Levengood, 28 USPQ 2d 1300 (Bd. Pat. App. & Int. 1993).

Furthermore, and most importantly, the proposed modification cannot render the prior art unsatisfactory for its intended purpose. The operation of reciprocation of the carriages in Van Wonderen et al. cannot be combined with the continuous loop path of Berns et al. without rendering the combination inoperable. Specifically, the carriages can't move in linear reciprocal motion and in a continuous path at the same time.

Accordingly, while making the proposed modifications proposed by the Examiner, the change would change the principal operation of the reference which is not allowed by MPEP § 2143.02, See *In Re Rady*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Accordingly, there is a lack of suggestion in the prior art to combine references as discussed in Section 2145(X)(C) of the MPEP.

Claim 2 as originally provided includes an additional limitation of a linear motor drive system having a stator proximate to the trackway and at least one other element connecting to at least one of a plurality of mold block assemblies. This element was not addressed by the rejections in the Office Action. Furthermore, since neither Van Wonderen et al. nor Berns et al. provide for this capability, then this claim is separately allowable on this point as well.

The major difference between the Office Action's argument and the claims intended by the Applicant focus on the continuous loop aspect of the claimed limitations. Van Wonderen et al. lacks the ability to propel carriages in a continuous loop. There are only linearly reciprocated as described in that reference. Furthermore, there is no teaching or suggestion how the Van Wonderen et al. reference could be modified with the

Berns et al. reference to operate in a continuous loop fashion without the use of the Applicant's disclosure.

Claim 12 was rejected as being obvious over Berns et al. in view of Van Wonderen et al. and in further view of Weppert et al., U.S. Patent No. 5,164,204. Claim 12 stands or falls with claim 1.

Claims 19 and 38 were rejected as being obvious over Berns et al. in view of Van Wonderen et al. and further in view of Lupke, U.S. Patent No. 3,981,663. Once again, claims 19 and 31 depend from independent claims 16 and 29 respectively and are believed to be allowable based on their being dependent from allowable independent claims.

Claim 20 was separately rejected as being obvious over Berns et al. in view of Van Wonderen et al. and in further view of Lupke and Fulton, U.S. Patent No. 3,208,229. After reviewing the Lupke and Fulton references, the Applicant was unable to find any teaching apart from the Applicant's disclosure as to how the system of Lupke could be modified to incorporate the teachings of Fulton. Accordingly, the Applicant respectfully submits that claim 20 is separately allowable. A *prima facie* case of obviousness has not been met as it relates to this rejection.

Claims 21-24 and 28 were rejected as being obvious over Berns et al. in view of Van Wonderen et al. in further view of Lupke and Jones, U.S. Patent No. 5,682,758. Jones discloses a method for cooling asphalt. The citation relied upon by the Examiner describes a coolant dispenser 22 introducing coolant into a cooling chamber 18. However, there is no indication that the mist is directed on to any of the mold members. In fact, it is probable that this reference relies upon the heat of vaporization (i.e., the

turning of water into steam) to remove a significant amount of heat from the interior of the coolant chamber without directing the mist on the molds themselves. The Office Action appears to be relying upon the teachings provided by the Applicant and unrelated references to formulate in hindsight this obviousness rejection. Accordingly, a *prima facie* case of obviousness has not been established, and claims 21-24 and 28 are separately allowable on this basis as well.

Claim 30, 31, and 35 were rejected as being obvious over Van Wonderen et al. in view of Berns et al. While Berns et al. does appear to provide removable mounting members 58, so that different size mold block halves can be utilized, it is important to realize that in claim 29 the adapter is connected to the first holder and the first mold block. The equivalent of this structure appear to would be between the mounting member 58 and the mold block 30. Instead, the entire mounting member 58 must be replaced in the Berns et al. reference. Accordingly, claim 30 is believed to be separately allowable on this additional basis.

As it relates to claim 31, the mounting members 58 in Berns et al. may be removed from the clam shell pivot 56. However, there is no teaching or suggestion apart from the Applicant's disclosure that a release lever could be utilized to connect and release the adapter from the holder. This claim is believed to be separately allowable on this rationale.

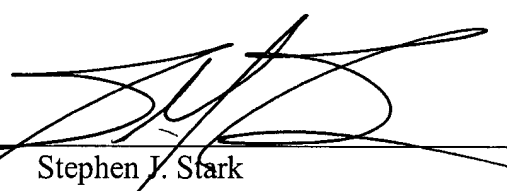
Claim 35 stands or falls on claim 29.

Conclusion

Claims 1-38 remain pending in the application. No additional independent claims or dependent claims have been created through this Amendment. No additional fees are

believed to be due at this time. As amended and explained through this response, all pending claims 1-38 are now believed to be allowable.

Respectfully submitted,

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on this 29th day of September, 2003.

By: 
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